



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,898	03/23/2001	Takashi Mizuguchi	36856.453	8703

7590 07/30/2003

Keating & Bennett LLP
10400 Eaton Place, Suite 312
Fairfax, VA 22030

EXAMINER

WELLS, NIKITA

ART UNIT

PAPER NUMBER

2881

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/816,898	Applicant(s) MIZUGUCHI ET AL.	
	Examiner Nikita Wells	Art Unit 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2 and 5</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. (5,815,900) in view of Hayes et al. (5,707,684).

With respect to the claims 1-8 and 13-17, Ichikawa et al. disclose (Abstract; Figs. 1, 2, and 7; Col. 6, lines 59 to Col. 7, lines 12; Col. 8, lines 1-17; Col. 10, lines 38-43 and 55-63; and Col. 13, lines 39-41) a method for adjusting the frequency of an electronic component device, the method comprising the steps of: providing an electronic component device having an electrode disposed on a surface thereof; etching the electrode disposed on the surface of the electronic component device by irradiating an ion beam on the electrode. Ichikawa et al. fails to disclose that the ion beam irradiation is performed while moving at least one of the electronic component device or the ion beam in at least one direction along the surface of the electronic component device on which the electrode is disposed.

However, Hayes et al. disclose (Figs. 5; Col. 1, lines 41-51; and Col. 7, lines 7-24) a method for producing micro-optical components including ion etching performed while moving the electronic component device in at least one direction along the surface of the electronic component device on which the electrode is disposed.

Art Unit: 2881

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to recognize and substitute the method for producing micro-optical components of Hayes et al. into the method for adjusting the frequency of an electronic component device of Ichikawa et al. in order to minimize variations in etching when ion beam etching is performed on the electrode of the electronic component in order to achieve highly accurate frequency adjustment.

With respect to claims 9, 10, 18, and 19, Ichikawa et al. disclose (Fig. 1; and Col. 6, lines 59 to Col. 7, lines 12) a method for adjusting the frequency of an electronic component of a surface acoustic wave device, which includes a piezoelectric substrate and an interdigital transducer having a plurality of electrode fingers disposed on a surface of the piezoelectric substrate (Fig. 1).

With respect to claims 11 and 20, Ichikawa et al. disclose (Col. 10, lines 38-43) a method for adjusting the frequency of an electronic component device wherein the electronic component comprises a piezoelectric oscillator.

With respect to claims 12 and 21, Ichikawa et al. disclose (Fig. 1 and Col. 2, lines 45-64) a method for adjusting the frequency of an electronic component device having an electrode disposed on a surface thereof; etching the electrode disposed on the surface of the electronic component device by irradiating an ion beam on the electrode. Ichikawa et al. fail to specifically disclose that the irradiating ion beam is bent by applying an electric field or a magnetic field. However, the bending of the ion beam which is used for beam etching purposes is inherent in the beam the propagation, focusing, and deflection of the beam and is all too well known in prior art.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ella et al. (6,456,173 B1) disclose a method and a system for tuning a bulk acoustic wave device at the wafer level by adjusting the device thickness.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikita Wells whose telephone number is (703) 305-0416. The examiner can normally be reached 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (703) 308-4116. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Nikita Wells

Examiner, Art Unit 2881

July 17, 2003